

On the applicability to semirings of two theorems from the theory of rings and modules

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Abstract

Problems concerning the extension of the Baer criterion for injectivity and embedding theorem of an arbitrary module over a ring into an injective module to the case of semirings are treated. It is proved that a semiring S satisfies the Baer criterion and every S -semimodule can be embedded in an injective semimodule if and only if S is a ring. © 2008 Pleiades Publishing, Ltd.

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Keywords

Baer criterion for injectivity, Commutative monoid, Embedding of modules, Semigroup, Semimodule, Semiring